

REMARKS

Claims 12- 40 are pending in the present application. In the Office Action mailed March 7, 2005, claims 12-40 were rejected under 35 U.S.C. § 112, first paragraph, on the basis that the specification does not comply with the written description requirement; claims 12-17, 22, 24-36, 39, and 40 were rejected under 35 U.S.C. § 102(a) as being anticipated by the Ito et al. reference; claims 24-37 and 40 were rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,325,792 to Swinger et al. in view of the Stern et al. reference; claims 12-20, 22, 23, 38, and 39 were rejected under 35 U.S.C. § 103(a) as obvious over the Swinger et al. reference in view of the Stern et al. reference and U.S. Patent No. 4,903,693 to Warner et al.; and claim 21 was rejected under 35 U.S.C. § 103(a) as obvious over the Swinger et al. reference in view of the Stern et al. reference, the Warner et al. reference, and U.S. Patent No. 4,842,599 to Bronstein.

The rejection under 35 U.S.C. § 112, first paragraph, states that neither the specification nor U.S. Patent No. 4,764,930 to Bille et al., which is referenced on page 6 of the originally filed specification, support the limitation of an "optimized pulse energy density above a minimum level". While the '930 patent to Bille et al. may not support this limitation, U.S. Patent No. 4,988,348, which is referenced on page 2 of the specification originally filed as U.S. Patent Application No. 08/725,070, now U.S. Patent No. 6,110,166, to which the present application claims priority, does support this limitation. Particularly, the '348 patent teaches that for corneal tissue removal, preferable that the pulse energy density is at least 10 J/cm^2 (i.e., $10 \mu\text{J}/(10 \mu\text{m})^2$). See col. 7, l. 52 – col. 8, l. 9.

By way of the above amendments, the specification now includes reference to the '348 patent and states the preferred pulse energy density as detailed in the '348 patent. This amendment is made in accordance with MPEP § 608.01(p), and no new

matter has been added. The undersigned hereby declares that the amendatory material, as it is drawn from the '348 patent, consists of the same material incorporated by reference into U.S. Patent Application No. 08/725,070, filed on October 2, 1996, now U.S. Patent No. 6,110,166, and into U.S. Patent Application No. 08/407,508, filed on March 20, 1995, now abandoned, the disclosures of which were incorporated by reference into the present application. In view of the amendment to the specification, Applicants request that the rejection to claims 12-40 under 35 U.S.C. § 112, first paragraph, be withdrawn.

Turning to the anticipation rejection to claims 12-17, 22, 24-36, 39, and 40 over the Ito et al. reference, this rejection is improper because the Ito et al. reference does not constitute prior art over the claims of the present application. The subject matter of all pending claims was disclosed in the original priority application, namely U.S. Patent Application No. 08/407,508, filed on March 20, 1995, now abandoned. In comparison, the Ito et al. reference is dated September/October 1996. Thus, the Ito et al. reference does not qualify as prior art over the pending claims of the present application. As such, Applicants request that the rejection to claims 12-17, 22, 24-36, 39, and 40 under 35 U.S.C. § 102(a) be withdrawn.

The remaining rejections in the Office Action are based upon obviousness. The MPEP has set the following standard for establishing a *prima facie* case of obviousness:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.

MPEP § 2142. For the reasons discussed below, neither the Swinger et al. nor the Stern et al. references provide any suggestion or motivation to combine their respective teachings. Rather, the Swinger et al. reference teaches away from combination with the Stern et al. reference.

Claim 24 was rejected as being obvious over the Swinger et al. reference in view of the Stern et al. reference. The Swinger et al. reference teaches that the corneal flap is formed using a pulsed beam having an energy density of $5 \mu\text{J}/(10 \mu\text{m})^2$ or less. This teaching arises from recognition of the problem that “[t]he prior art also fails to recognize the benefits of ablating eye tissue with a laser beam having a low energy density.” Col. 2, ll. 46-47. In support of this teaching, the Swinger et al. reference further teaches that a laser beam having a lower energy density “will clearly have the advantage of inflicting less trauma to the underlying tissue.” Col. 2, ll. 47-50; see also col. 7, ll. 2-3. The teaching of a maximum energy density below $5 \mu\text{J}/(10 \mu\text{m})^2$ is strongly emphasized throughout the Swinger et al. reference. See col. 8, ll. 33-38; col. 15, ll. 46-55; col. 17, ll. 60-62; col. 25, ll. 21-22 (“... keeping the beam energy or irradiance to a minimum.”); claim 1, col. 36, ll. 41-42; claim 14, col. 38, ll. 12-13.

The Stern et al. reference was published in April 1989, more than two years prior to the priority date of the Swinger et al. reference. The Stern et al. reference teaches that beam energy densities may exceed the $5 \mu\text{J}/(10 \mu\text{m})^2$ as taught by the Swinger et al. reference. In the face of this prior teaching, which was publicly known as of the priority date of the Swinger et al. reference, the Swinger et al. reference teaches toward energy densities at or below the $5 \mu\text{J}/(10 \mu\text{m})^2$ level and away from the higher energy densities taught by the Stern et al. reference. For this reason, the Swinger et al. reference teaches away from combination with the Stern et al. reference to the extent that the combination cannot be used to establish a *prima facie* case of obviousness over claim 24 of the present application, especially where claim 24 includes the

limitation of "an optimized pulse energy density above a minimum level for achieving tissue modification" and the minimum level is 10 J/cm² (i.e., 10 μ J/(10 μ m)² or more.

Claims 25-37 and 40 each ultimately depend from claim 24. Where the combination of the Swinger et al. and the Stern et al. references do not render claim 24 obvious, such a combination also does not establish a *prima facie* case of obviousness over claims 25-37 and 40.

Claims 12-20, 22, 23, 38, and 39 were rejected as obvious over the combination of the Swinger et al., Stern et al., and Warner et al. references. As discussed above, the Swinger et al. reference teaches away from combination with the Stern et al. reference. In addition, the Warner et al. reference does not provide any additional motivation to combine those two references. Therefore, the combination of the Swinger et al., Stern et al., and Warner et al. references does not establish a *prima facie* case of obviousness over claims 12-20, 22, 23, 38, and 39.

Claim 21 was rejected as obvious over the combination of the Swinger et al., Stern et al., Warner et al., and Bronstein references. As discussed above, the Swinger et al. reference teaches away from combination with the Stern et al. reference. In addition, neither the Warner et al. reference nor the Bronstein reference provide any additional motivation to combine the Swinger et al. and Stern et al. references. Therefore, the combination of the Swinger et al., Stern et al., Warner et al., and Bronstein references does not establish a *prima facie* case of obviousness over claim 21.

For the foregoing reasons, Applicants request reconsideration of the obviousness rejections stated in the Office Action mailed March 7, 2005.

Respectfully submitted,

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